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10/071,738	02/08/2002	Weimin Yang	USP1768A-DCI	2936

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EXAMINER
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BLUDAU, BRANDON S

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/071,738

Applicant(s)

YANG, WEIMIN

Examiner

Brandon S. Bludau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1 recites the limitation "said universal smart card comprises" in line 3, 3<sup>rd</sup> paragraph of the claim. There is insufficient antecedent basis for this limitation in the claim. The examiner will assume that the Applicant meant for this to read "said universal smart card API comprises [...]."
2. Claims 8, 10 are rejected because of unclear and indefinite language. Line 2 of both claims read "a rest each Slot", the wording of this is unclear as to its intended meaning. The claims must also be one sentence in length, therefore the second sentence starting Generally, should be corrected. This second sentence is also rejected because of indefinite language and fails to further limit the claim. The intended scope of the word generally is too vague and is unclear as to whether it is part of the claimed invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Bragstad et al (US PgPub 20020120842).

4. As per claim 1, Bragstad discloses a universal crypto-adapter system for supporting one or more smartcard applications with a plurality of smart cards through a smart card reader (paragraph [0018] lines 1-9), comprising:

Means for providing implementations of API specification for said smartcard applications (paragraph [0019] lines 1-6); and

A universal smart card API for communicating with said API means and said smart card reader for handling smart card operations including file and data managements and cryptographic operations, wherein said universal smart card comprises at least a smartcard translator to retrieve and translate smart card data saved in said respective smart card into a plurality of logic partitions that are compatible with each of said smartcard applications of said API means (paragraph [0019]).

5. As per claim 2, Bragstad discloses the system as recited in claim 1, wherein the smartcard applications include CSP (Microsoft Cryptographic Application Interface) applications and a PKCS11 (Cryptographic Token Interface Standard from RSA Security) applications (paragraph [0018] lines 1-9).

6. As per claim 3, Bragstad discloses the system as recited in claim 2, but does not disclose wherein said smart cards include WPC card, SCT card and Java card. The examiner notes that at the time of the invention WPC, SCT and Java card are all prevalent technologies and are well known in the art. Moreover, SCT and Java both

comply with the ISO 7816-4 standard as referenced by the Applicant and thus are intimate with claimed "smart card".

7. As per claim 4, Bragstad discloses the system as recited in claim 3, wherein said API means includes a CSP component which is a CSP API specification that implements a CSP context and context policies and a PKCS11 component which is a PKCS API specification that implements a PKCS session, a crypto slot and a PKCS object management (paragraph [0020]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5,6,11,13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bragstad, and further in view of Kimlinger (US Patent 6360952).

9. As per claim 5, Bragstad discloses the system as recited in claim 4, but does not disclose wherein said universal smart card API comprises at least a WPC smartcard translator, a SCT smartcard translator, and a Java card smartcard translator corresponding to said WPC card, said SCT card and said Java card respectively.

Kimlinger discloses an application interface that "allows application programs to communicate with different types of cards using different protocols without the need for the application programs to be card specific (column 9 lines 14 – 16) and further extends his invention to include further embodiments using different [programming]

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languages (column 7 lines 61-67). Kimlinger's embodiment discusses smart cards programmed in C and C++ languages. The examiner notes that one skilled in the art would appreciate that SCT cards and Java cards at the time of the invention were quite popular and prevalent in the art of smart cards and thus they are clearly anticipated by Bragstad and Kimlinger and that the Java programming language utilized in Java cards is covered by Kimlinger.

Kimlinger and Bragstad are analogous art because they both discuss card access systems that support multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad to include various other smart card technologies especially Java as discussed above.

Motivation to modify Bragstad with Kimlinger as discussed above would have been to support multiple cards and card readers with different protocols to enable changes in smart card and smart card reader hardware without requiring rewriting of application software, as taught in Kimlinger (column 1, lines 27-31).

10. As per claim 6, Bragstad discloses the system as recited in claim 5, wherein the said universal crypto-adaptor further supports cryptographic operations, including a RSA private key encryption or signing (paragraph [0024]) and DES encryption and decryption by defining a vendor PKCS object attribute, CKA\_DONTDORSA (paragraph [0039] lines 39-45).

11. As per claim 11, Bragstad discloses the system as recited in claim 6, wherein when said smart card data is retrieved from said smart card, said smartcard translator

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converts TLV into PKCS11 object attributes and creates said PKCS11 object while said PKCS11 object attribute is also in TLV format (paragraph [0020] wherein the examiner notes that the standard for smart cards ISO 7816-4 referenced by the Applicant calls for data objects to be in TLV format as would be known by one of ordinary skill in the art).

12. As per claim 13, Bragstad discloses the system as recited in claim 10, wherein when said smart card data is retrieved from said smart card, said smartcard translator converts TLV into PKCS11 object attributes and creates said PKCS11 object while said PKCS11 object attribute is also in TLV format (paragraph [0020] wherein the examiner notes that the standard for smart cards ISO 7816-4 referenced by the Applicant calls for data objects to be in TLV format as would be known by one of ordinary skill in the art).

13. As per claim 14, Bragstad discloses a method of incorporating a smart card with a cryptographic application, comprising the steps of:

(d) Searching public data on said smart card and creating a public application object correspondingly by said smartcard translator such as a PKCS11 object or a CSP object (paragraph [0035]);

(f) Searching private key object on smart card and creating private application objects correspondingly by said smart card translator (paragraph [0034]);

(g) Searching said private key object on said smart card for confirmation (paragraph [0023]);

(h) Receiving a function command with a private key object handle and data from said smartcard application by using said private key object handle and forwarding said data to said smart card with specifying a specific file name for executing a specific

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function, wherein said smartcard translator gets an attribute from said private key object so that said smartcard translator knows how to access a key file on said smart card (paragraph [0021]); and

(i) Receiving said data executed from said smart card and returning to said smartcard application (this is expressly implied in Bragstad as a key exchange process is well known to one skilled in the art).

Bragstad does not disclose:

(a) checking for a smart card;

(b) requesting and receiving a smart card ATR (Answer to reset string) from said smart card when said smart card is found;

(c) selecting a smartcard translator correspondingly, depending on said card ATR;

Kimlinger does disclose (a-c) in column 4 lines 23-31:

(a) checking for a smart card;

(b) requesting and receiving a smart card ATR (Answer to reset string) from said smart card when said smart card is found;

(c) selecting a smartcard translator correspondingly, depending on said card ATR;

(e) Receiving a password from a smartcard application, such as CSP application or PKCS11 application, and sending said password to said selected smartcard translator for sending said password to said smart card for confirmation (column 2 lines 34-48);



Kimlinger and Bragstad are analogous art because they both discuss card access systems that support multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad to include identifying multiple smart cards with an ATR string as discussed above.

Motivation to modify Bragstad with Kimlinger as discussed above would have been to support multiple cards and card readers with different protocols to enable changes in smart card and smart card reader hardware without requiring rewriting of application software as taught in Kimlinger (column 1, lines 27-31).

14. As per claim 15, Bragstad discloses the method as recited in claim 14, wherein when said function is signing function, said function command is a signing command and said data forwarded to said smart card from said smartcard application in the step (h) is signed by said smart card and returned to said smartcard application through said universal crypto-adaptor system (paragraph [0036] where the signing is expressly implied by changing the key specification to "AT\_SIGNATURE" when requested by the application).

15. As per claim 16, Bragstad discloses the method as recited in claim 14, further comprising a step of saving data in a "Type, Length and Value" (TLV) format. The examiner notes that the standard for smart cards ISO 7816-4 referenced by the Applicant calls for data objects to be in TLV format as would be known by one of ordinary skill in the art.

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16. Claims 7,8,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bragstad, and further in view of Hymel (US Patent 6216015).

17. As per claim 7, Bragstad discloses the system as recited in claim 1, but does not disclose wherein said universal smart card API splits said smart card data received from said smart cards into said logic partitions, wherein each of said partitions is a slot to store said smart card data of different information from said smart cards.

Hymel discloses a smart card API that splits said smart card data received from said smart cards into said logic partitions, wherein each of said partitions is a slot to store said smart card data of different information from said smart cards (column 3 lines 42 –65).

Hymel is analogous art because it discusses a method of managing smart card data from multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad to include a memory portion to partition the data from multiple smart cards for access by smart card applications.

Motivation to modify Bragstad to include Hymel would have been to provide for an “efficient method of management of data and information downloaded from multiple smart cards...” as taught in Hymel (column 1 lines 58 –60).

18. As per claim 8, Bragstad discloses the system as recited in claim 1, but does not disclose wherein universal smart card API includes at least slot 0 as a master slot that contains cardholder information, a rest each slot is for each identity or application, a Slot 1 for credit card data, and a Slot 2 for health insurance data.

Hymel does disclose wherein a smart card API includes at least slot 0 as a master slot that contains cardholder information, a rest each slot is for each identity or application, a Slot 1 for credit card data, and a Slot 2 for health insurance data (column 3 lines 42 –65 wherein the type of data that can be stored is discussed in column 1 lines 19-21).

Hymel is analogous art because it discusses a method of managing smart card data from multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad to include a memory portion to partition the data from multiple smart cards for access by smart card applications.

Motivation to modify Bragstad to include Hymel would have been to provide for an “efficient method of management of data and information downloaded from multiple smart cards...” as taught in Hymel (column 1 lines 58 –60).

19. As per claim 12, Bragstad discloses the system as recited in claim 8, wherein when said smart card data is retrieved from said smart card, said smartcard translator converts TLV into PKCS11 object attributes and creates said PKCS11 object while said PKCS11 object attribute is also in TLV format (paragraph [0020] wherein the examiner notes that the standard for smart cards ISO 7816-4 referenced by the Applicant calls for data objects to be in TLV format as would be known by one of ordinary skill in the art).

20. Claims 9,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bragstad, in view of Kimlinger and further in view of Hymel (US Patent 6216015).

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21. As per claim 9, Bragstad/Kimlinger disclose the system as recited in claim 6, but do not disclose wherein said universal smart card API splits said smart card data received from said smart cards into said logic partitions, wherein each of said partitions is a slot to store said smart card data of different information from said smart cards.

Hymel discloses a smart card API that splits said smart card data received from said smart cards into said logic partitions, wherein each of said partitions is a slot to store said smart card data of different information from said smart cards (column 3 lines 42 –65).

Hymel is analogous art because it discusses a method of managing smart card data from multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad/Kimlinger to include a memory portion to partition the data from multiple smart cards for access by smart card applications.

Motivation to modify Bragstad/Kimlinger to include Hymel would have been to provide for an “efficient method of management of data and information downloaded from multiple smart cards...” as taught in Hymel (column 1 lines 58 –60).

22. As per claim 10, Bragstad/Kimlinger disclose the system as recited in claim 6, but do not disclose wherein the universal smart card API includes at least slot 0 as a master slot that contains cardholder information, a rest each slot is for each identity or application, a Slot 1 for credit card data, and a Slot 2 for health insurance data.

Hymel does disclose wherein a smart card API includes at least slot 0 as a master slot that contains cardholder information, a rest each slot is for each identity or

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application, a Slot 1 for credit card data, and a Slot 2 for health insurance data (column 3 lines 42 –65 wherein the type of data that can be stored is discussed in column 1 lines 19-21).

Hymel is analogous art because it discusses a method of managing smart card data from multiple smart cards.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bragstad to include a memory portion to partition the data from multiple smart cards for access by smart card applications.

Motivation to modify Bragstad to include Hymel would have been to provide for an “efficient method of management of data and information downloaded from multiple smart cards...” as taught in Hymel (column 1 lines 58 –60).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S. Bludau whose telephone number is 571-272-3722. The examiner can normally be reached on Monday -Friday 8:00-5:30.

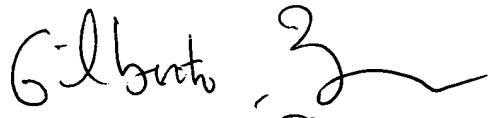
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brandon S Bludau  
Examiner  
Art Unit 2132

*BB*  
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